

Monticello Vicinity Property Project

**Site Assessment Report for Young's Machine
Company (MS-00685-CS and MS-00688-CS)**

June 1995

DRAFT



**U.S. Department of Energy
Grand Junction Projects Office**

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Work Performed Under DOE Contract No. DE-AC04-86ID12584 for the U.S. Department of Energy

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For
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(MS-00685-CS and MS-00688-CS)

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Prepared for
U.S. Department of Energy
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Grand Junction Projects Office

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EXECUTIVE SUMMARY

The U.S. Department of Energy-Grand Junction Projects Office conducted a site assessment at DOE ID No. MS-00685-CS and MS-00688-CS, Young's Machine Company, located at 1149 North Main Street, Monticello, San Juan County, Utah, in October 1993, September 1994, and May 1995. The site assessment was conducted to determine if Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) hazardous substances (other than radium-226) had potentially been released on the property. This was warranted because of the nature of past and present business practices at the property.

Areas of the property that were identified to have potentially released hazardous substances include: 1) repair/machine shop waste effluent drain line and sediment traps/sumps; 2) repair/machine shop waste effluent disposal area; 3) a mining equipment painting and sandblasting area; 4) areas of discolored/oily soils adjacent to heavy mining equipment; 5) discolored soils beneath an electrical transformer/capacitor bank; 6) various locations where lead-acid batteries have been discarded/stored; 7) areas of discolored/oily soils adjacent to a storage shed located on the west side of the property; 8) a concrete floor drain/sump located on the north side of the large metal shop/storage building; 9) an on-site trash burning and disposal area; 10) a drum storage area; 11) a scrap metal storage area; 12) a small electrical transformer that was discovered in the scrap metal storage area; 13) two abandoned "hot tanks" that were formerly used for degreasing engines and parts; and 14) several miscellaneous storage buildings and structures.

A site-specific Sampling and Analysis Plan will be prepared to characterize the areas of concern. A Site Characterization Report will be written to document the results of the sampling activity.

If suspect hazardous substances are unexpectedly encountered during remediation at this site in any uncharacterized area, the process outlined in Attachment 1, Guidelines for Managing Suspect Hazardous Substances Encountered During Remediation at the Monticello Mill Tailings Site and Vicinity Properties, of the *Monticello Remedial Action Project, Special Waste Management Plan for the Monticello Mill Tailings Site and Vicinity Properties* (DOE 1995a) will be implemented.

1.0 INTRODUCTION

The Monticello Vicinity Properties (MVPs) Site was placed on the Comprehensive Environmental Response, Compensation, and Liability Act's (CERCLA) National Priorities List in 1989 to ensure that appropriate actions are taken to protect public health and the environment from hazards created by past operations. The MVP project addresses the remediation of included residential and commercial properties in the city of Monticello which are contaminated by residue from wind-blown radioactive materials originating from the Monticello Mill Tailings Site, from ore stockpile residues, and from the use of uranium mill tailings as construction fill material.

Environmental restoration of the MVP is prescribed in a Federal Facility Agreement (FFA) signed in December 1988 among the U.S. Department of Energy Grand Junction Projects Office (DOE-GJPO), the U.S. Environmental Protection Agency, and the State of Utah. In accordance with the FFA and CERCLA, the DOE-GJPO is responsible for cleanup of hazardous substances that equal or exceed risk-based standards on included MVPs, and for management of wastes generated during the remediation in compliance with all applicable or relevant and appropriate requirements.

The DOE-GJPO conducted a site assessment at DOE ID No. MS-00685-CS and MS-00688-CS, Young's Machine Company, during October 1993, September 1994, and May 1995 to determine if CERCLA hazardous substances (other than radium-226) have potentially been released on the property. The site assessment was conducted because of the nature of past and current business activities at the site.

The site assessment (which consisted of an historical data review, interviews with site owners, and site inspections) was conducted in accordance with the processes and concepts outlined in the *Monticello Remedial Action Project, Special Waste Management Plan for the Monticello Mill Tailing Site and Vicinity Properties* (DOE 1995a) and the *Environmental Procedures Catalog* (DOE 1995b). Additional guidance was obtained from the American Society of Testing and Materials (ASTM) Procedure E1528-95, *Standard Practice for Environmental Site Assessments: Transaction Screen Process* (ASTM 1993). The environmental setting of these MVPs, including discussions of geology, hydrology, potential pathways and receptors, is presented in the *Final Remedial Investigation/Feasibility Study-Environmental Assessment for the Monticello, Utah, Uranium Mill Tailings Site* (DOE 1990). This Site Assessment Report was written to summarize the findings of the site assessment, to evaluate the identified areas of concern, and to provide recommendations for further actions, if warranted.

1.1 Definitions

Area of Concern - an area suspected of a hazardous substance release from analysis of site assessment information. Areas of concern generally warrant follow-up characterization or remediation.

CERCLA Hazardous Substance - the term "hazardous substance" means (A) any substance designated pursuant to Section 311(b)(2)(A) of the Federal Water Pollution Control Act, (B) any element, compound, mixture, solution, or substance designated pursuant to Section 102 of CERCLA, (C) any hazardous waste having the characteristics identified under or listed pursuant to Section 2001 of the Solid Waste Disposal Act (SWDA) (but not including any waste the regulation of which under the SWDA has been suspended by Act of Congress), (D) any toxic pollutant listed under Section 112 of the Clean Air Act (CAA), (E) any hazardous air pollutant listed under Section 112 of the CAA, and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to Section 7 of the Toxic Substances Control Act. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under sub-paragraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).

Contaminant or Pollutant - as defined by Section 101(33) of CERCLA, includes, but is not limited to, any element, substance, compound, or mixture, including disease-causing agents, which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions, or physical deformations, in such organisms or their offspring. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under Section 101(14) (A) through (F) of CERCLA, nor does it include natural gas, liquified natural gas, or synthetic gas of pipeline quality. In conducting a removal action, the term contaminant or pollutant means any contaminant or pollutant that may present an imminent and substantial danger to public health or welfare.

Site Inspection - an on-site visit to determine whether a release (of contaminants or pollutants) has occurred, or if there is the potential for such a release. The associated risks and threats will also be evaluated. The purpose of the on-site assessment is to augment the data collected during the property records research and to generate, if necessary, limited sampling and other field data.

Release - means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant). This definition excludes, among other things, any release of source, byproduct, or special nuclear material from any processing site designated under Section 102(a)(1) OR 302(a) of the Uranium Mill Tailings Radiation Control Act of 1978. For purposes of this Site Assessment Report, release also means threat of release.

Site Assessment - a thorough qualitative review of the site based on field observations and readily available existing information. Includes a review of property records to investigate past or current activities at a site or adjacent properties with respect to potential hazardous substance releases and inspection of the site for evidence of contaminant releases. When appropriate, limited sampling and analysis may be conducted. The report may include recommendations for further site characterization.

2.0 SITE LOCATION AND DESCRIPTION

Young's Machine Company is located at 1149 North Main Street, Monticello, San Juan County, Utah. A Monticello vicinity map is provided as Figure 1. A detailed map of the property is provided as Figure 2.

Both properties are owned by Mr. Jack N. Young. Monticello Vicinity Property MS-00685-CS consists of approximately 6.6 acres. The property consists hilly terrain which slopes to the south, southeast. The uncleared portions of the property are vegetated with pinyon pine and juniper trees, scrub oak brush, and other native plants and grasses. All of the structures associated with Young's Machine Company are located on the MS-00865-CS parcel. Structures located on the MS-00685-CS property include a single-story brick building which is used as the main office area; a single-story metal building which consists of a machine shop, repair shop, and parts storage area; a large single-story metal building which is used for heavy/mining equipment repair, metal working (cutting, welding, shearing, etc.) and storage area, a warehouse for heavy equipment parts (engines, transmissions, differentials, etc.); and several miscellaneous out-buildings including a storage shed, a barn used for hay storage, a cellar used for storage of food-stuffs, an "up-side down" house used for miscellaneous metal and equipment storage, a tractor-truck trailer used for tire storage; and a well/pump house.

MS-00688-CS consists of approximately 1.6 acres. This parcel is located south of the MS-00685-CS parcel. The property is characterized by predominantly flat terrain, and is located in a low-lying area adjacent to North Main Street (also known as State Highway 191). The property is sparsely vegetated, except for native grasses and plants. A double-wide mobile home is located on the southern portion of this property. This is the only structure located on this property.

3.0 SITE ASSESSMENT SUMMARY

3.1 Description of Prior and Current Land Use

Historical and current ownership information on the use of the property was obtained through a property title search (see Attachment 1). Land use information was obtained from interviews conducted with Mr. Jack N. Young on October 26, 1993, and September 27, 1994. Interview notes are included in Attachment 2. Historical and current use of MS-00685-CS and MS-00688-CS are described in this section:

According to Mr. Young, the office and machine shop buildings were constructed in approximately 1957 by Mr. Young's father and uncles. A large single-story metal building was later added to the west side of the existing machine shop and office buildings. This building was formerly part of the dismantled Mexican Hat, Utah uranium mill facility. Prior to the Young family acquiring this property, the site was vacant ground with no known prior use, except for agricultural/livestock grazing purposes.

Mr. Young began working at the family-owned business beginning in 1965. Mining equipment was manufactured at the site from 1957 to the early 1970's. Reflective of the decline in ore markets and the mining industry in the 1970's, the nature of activities conducted at Young's Machine Company shifted from production/manufacturing of new mining equipment, to rebuilding and overhauling, and repairing old and used mining and heavy construction equipment. To this day, Young's Machine Company continues to use this site for these purposes. In addition, Young's Machine Company now manufactures and markets exercising equipment.

Properties adjacent to Young's Machine Company are used primarily for residential and agricultural purposes. North Main Street borders both properties on the east; residential properties are located to the west; vacant, unimproved lands (used primarily for livestock grazing/agricultural purposes) are located to both the north and south of the subject properties.

3.1.1 Description of Buildings/Structures and Probable Use

Past and current uses of the buildings associated with Young's Machine Company are described as follows:

Building #1: This building has been, and continues to be used primarily as an office building and small parts warehouse/storage area.

Building #2: Activities conducted at this building include a metal machining and milling shop, engine/motor disassembly and rebuilding, engine and parts degreasing, and injection pump repair. Mr. Young indicated that both "hot tank" and "cold tank" degreasing processes have been used in this building. The solvents typically used in the cold tanks have been replaced with a product known as "Tenseen." Mr. Young has indicated that he will provide a Material Safety Data Sheet (MSDS) for the cold tank

reagent currently in use. An MSDS was obtained for the material that Mr. Young stated was currently used in the hot tank. The material is a strongly basic solution containing anhydrous sodium hydroxide. The MSDS is included as attachment 2 to this report. Several fifty-five gallon drums labeled as "stoddard solvent", and several 5-gallon buckets labeled as "carburetor cleaner" were also noted adjacent to the tanks. It is not known what various solvents have been used over the years for degreasing purposes. At the conclusion of the degreasing process, engines are hoisted out of the tanks and power sprayed with water to remove any remaining solvent or grease residue. The waste water is collected in a floor drain which is discharged into a surface impoundment located south of the machine shop.

Building #3: The main bay of this building used as a repair shop for mining and heavy construction equipment. Parts and motors are removed and/or installed in this area, and equipment is repaired. Metal working and fabrication activities (cutting, welding, shearing, etc.) are also conducted in this building. Various metal working and fabricating equipment (presses, shearing machines, stamping machines, etc.) and tools are also stored at this location, along with metal fabric (steel plate, tubing, rods, etc.). The western half of the building is used as a warehouse for large equipment parts (engines, transmissions, differentials, etc.).

Building #4: This building is currently used as storage for miscellaneous household and recreational items (boat, furniture, toys, etc.). Large exhaust/ventilation fans located on the north side of the building suggest that it may have been originally used for other purposes (such as a painting/autobody shop). The interior of this building could not be inspected during the site inspections; however, no evidence of hazardous substances was noted.

Building #5: This building appears to be used primarily for hay and livestock feed storage. A small corral is attached to the south side of the structure.

Building #6: This structure appears to be a small well or pump house. Pipe and distribution lines typical of a well were observed on the interior of this shed.

Building #7: This structure is buried inside the side of a small hill located north of the main shop area. The structure appears to be constructed on concrete and steel. Mr. Young indicated that explosives (used for mining purposes) were once stored in this structure; however, according to Mr. Young, all of the explosives have since been removed, and the "cellar" is now used as storage for food stuffs. The door to the cellar is locked, and the interior of the structure has not been inspected.

Building #8: This structure is a double-wide mobile home, and is a private residence located south of the main shop area. This structure is not associated with the operations of Young's Machine Company. This is the only structure located on MS-00688-CS.

3.1.2 Description of Other Land Uses

Past and current land uses associated with Young's Machine Company are described as follows:

Machine Shop Waste Effluent Disposal Area: Floor drains inside the machine shop (Building #2) collect liquid wastes that are primarily generated through engine degreasing activities. After engines have been "boiled out" (i.e., degreased) in the hot tank, they are hoisted out of the solution, and sprayed off with water. This waste water is collected via a floor drain. The drain line extends beneath the floor of the shop area, underneath the roadway/parking area located south of the shop, and is discharged into a surface impoundment located approximately 150 feet from the shop. This impoundment measures approximately 15 feet in diameter. An overflow channel/ditch has been dug on the west side of the impoundment. The ditch leads to a second, smaller impoundment (approximately 8 feet in diameter) located approximately 25 feet west of the first impoundment. Another overflow ditch has been dug on the south side of this impoundment. Based on visual observation during the site inspections of this property, it appears that liquid effluents are discharged from the machine shop, and are allowed to leach into the subsurface via a network of impoundments and ditches apparently constructed by the owner. The owner has indicated that several 55-gallon drums were buried below the terminus of the drain line to serve as a makeshift septic tank. The owner also indicated that the contents of the barrels are pumped several times during the year.

Debris Pile: A trash and debris disposal area is located north and west of the main shop area. The trash/debris pile measures approximately 90 feet long, 35 feet wide, and 8 feet high. This area appears to have been used for several years as a disposal area for trash and debris generated from the machine shop operations. The contents of the disposal area also appear to have been burned on several occasions. Based on visual observations of the disposal area, contents of the trash area include 55-gallon drums, buckets (assorted sizes), miscellaneous containers, household trash, tires, scrap metal, wood, engine parts, etc.

Drum Storage Area: A drum storage area is located in the northwest corner of MS-00685-CS. Approximately sixty 55-gallon drums and thirty 5-gallon buckets are currently stored in this location. Most of the drums are full of unknown liquids. According to Mr. Young, many of the drums contain waste motor oils that were drained during the process of repairing mining and heavy equipment. Mr. Young stated that the drums containing waste oils are only stored in this area temporarily. Mr. Young also indicated that the waste oils are burned in an oil-burning furnace located in the repair shop, to provide heat during the winter months. Visual observations of the drum storage area indicate that most of the drums are full. However, labeling observed on the drums indicate that some of the drums may contain liquids/wastes other than waste oil. Drums were labeled as containing motor oil (i.e., TDH oil), hydraulic fluid, industrial coatings (paint), carburetor cleaner, solvents, etc.. The contents of the drums appear to have been leaking at this location for an extended period of time. Several drums were tipped over,

and the contents were observed to have leaked onto the ground surface. In many locations, soils surrounding the drums are saturated with what appears to be a waste oil material. Soils are discolored a dark black. In several locations, soils were saturated to the extent that the waste liquid could no longer soak or leach into the soils, rather the liquid was pooling on the ground surface. Efforts to store the drums in secondary containment structures have not been made. There was no evidence (i.e., moving old drums out and new drums in; tire tracks; disturbed soils, etc.) to support the owner's claim that the drums are routinely used for heating purposes.

Scrap Metal Storage Area: A scrap metal storage area is located north of the main shop buildings. This area appears to be used as a location for stockpiling potentially salvageable materials. Used equipment parts (pistons, heads, bearings, etc.) have been segregated into 55-gallon drums. Unsorted scrap metal is also stored at this location. Several discarded lead-acid batteries were observed at this location, including a pile of approximately 30 batteries. Visual observation indicates that many of the battery cases have cracked and the contents have leaked. What appears to be a small electrical transformer was also discovered amongst the debris. Two abandoned hot tanks were observed just north and east of the scrap metal storage area. Approximately 6 inches of sludge remained in the bottom of the tanks.

Improper Disposal of Waste Materials: Discolored soils were observed at numerous locations throughout the property. Based on visual observations, it appears that oils and/or motor fluids were drained from the mining and heavy equipment directly onto the ground surface. There were also several areas where it appears that liquid wastes/sludges were intentionally taken (out of the repair shop) to a location and dumped onto the ground surface. Lead-acid batteries were also noted to be randomly discarded over the property. A significant portion of the area located west and north of the main shop and office buildings, was littered with miscellaneous scrap, debris, trash, old equipment and vehicles, etc. In general, the "house-keeping" practices employed at this site are poor.

3.2 Site Inspections

An interview was conducted with Mr. Young on October 26, 1993, to determine the historical background of the site, and to determine the nature of activities conducted by Young's Machine Company. Mr. Young escorted Geotech personnel during a walk-through of the exterior portions of the property. On September 27, 1994, the site was again inspected to confirm locations where suspect hazardous substances may have been released to the environment, and to establish exterior sample locations. On May 23, 1995, after access issues with the owner were resolved by DOE personnel, the interior portions of the building were inspected for potential areas of contamination.

A photo-ionization detector (PID) was used as a field screening method to detect the volatile organic vapors at a given source. Soil screening techniques (e.g. polychlorinated biphenyl [PCB] screen, biases soil sampling, field pH, etc.) have not been employed at

this site to date. Based on information gained from interviews with the owner, and visual observations made during site inspections, several locations have been identified as potentially being contaminated with nonradiological hazardous substances. Individual areas of concern are illustrated in Figure 2 and are discussed below:

Machine Shop Waste Effluent Disposal Area: Floor drains inside the machine shop (Building #2) collect liquid wastes that are primarily generated through engine degreasing activities. After engines have been "boiled out" (i.e., degreased) in the hot tank, they are hoisted out of the solution, and sprayed off with water. This waste water is collected via a floor drain. The floor drain line extends beneath the floor of the shop area and exits on the west side of the building. The waste effluent is then discharged into a ten-inch (approximate) corrugated metal pipe/culvert which extends southward beneath the parking area/driveway, and is discharged into a surface impoundment located approximately 150 feet from the shop. This impoundment measures approximately 15 feet in diameter. An overflow channel/ditch has been dug on the west side of the impoundment. The ditch leads to a second, smaller impoundment (approximately 8 feet in diameter) located approximately 25 feet west of the first impoundment. Another overflow ditch has been dug on the south side of this impoundment. Based on visual observation during the site inspections of this property, it appears that liquid effluents are discharged from the machine shop, and are allowed to leach into the subsurface via a network of impoundments and ditches apparently constructed by the owner. The owner has indicated that several 55-gallon drums were buried below the terminus of the drain line to serve as a makeshift septic tank. The owner also indicated that the contents of the barrels are pumped several times during the year. Based on field observation, no indication that the contents of this disposal area have been recently pumped were evident. No organic vapors were detected using PID field-screening instrumentation at this location. According to Mr. Young, this method of disposal has been occurring since the early 1960's. Soils and groundwater downgradient of this disposal area are potentially contaminated from the disposal activities conducted at this location over the years.

An MSDS was obtained for the material that Mr. Young stated was currently used for engine degreasing. The material is a strongly basic solution containing anhydrous sodium hydroxide. The MSDS is included as attachment 2 to this report. Several fifty-five gallon drums labeled as "stoddard solvent", and several 5-gallon buckets labeled as "carburetor cleaner" were also noted adjacent to the hot tanks. It is not known what various solvents have been used over the years for degreasing purposes.

Machine Shop Waste Effluent Sediment Trap: A sediment trap is located approximately two feet west of the western machine shop exterior wall, in the concrete alleyway between Buildings #2 and #3. Two wastewater lines enter the sediment trap, and one line (which collects waste water from both the inflow lines) exits the sediment trap. The first inflow line is the floor drain line which collects waste effluents from the machine shop. The second inflow line is an eight inch (approximate) line which is suspected to be a storm water and an equipment wash water discharge line. A single discharge line exits the sediment trap and collects waste effluent from both the machine shop and the

suspected storm water/wash water discharge lines. A minimum of twelve inches of sediment and sludge-like materials were observed in the sediment trap. It is not known if the sediment trap is an enclosed structure (i.e., has a bottom). No organic vapors were detected using PID field-screening instrumentation at this location.

Equipment Painting, Sandblasting, and Washing Alley: A concrete alleyway is located between Buildings #2 and #3. According to Mr. Young, this area is routinely used for sandblasting, painting, and washing heavy equipment. Soils adjacent to the concrete alleyway were not discolored; however, due to their close proximity to the activities conducted at this location, they could potentially be contaminated with sandblasting and/or painting residues. No organic vapors were detected using PID field-screening instrumentation at this location.

Vehicle Wash Drain Line: A six inch metal pipe was discovered protruding out of the bank located south of the machine shop, at a distance of approximately 30 feet east of the machine shop waste effluent discharge area. Soils at the terminus of the pipe are locally discolored (i.e., oily). According to Mr. Young, this is a drain line from a former vehicle washing station. The area now consists of a concrete pad, and is used strictly for parking. Effluent does not appear to be discharged routinely from this pipe.

Miscellaneous Discolored Soils: Stained and discolored soils were noted at numerous locations throughout the property. Based on visual observation, several locations were noted where discolored soils exceeded 10 square feet.

Unknown grey/black sediments south of machine shop: A fine-grained, powdery material was noted along the edge of the southern parking area/driveway located south of the machine shop (Building #2). The material is located on the crest of the embankment, immediately above the machine shop waste effluent disposal area. The origin of the material is unknown; no organic vapors were detected using PID instrumentation; and the depth of the deposit is unknown.

Oil spots near heavy equipment: Dark, oily discolored soils were observed near mining equipment parked south of the machine shop. Motor oil appears to have been drained or leaked directly onto soils. Area of discoloration measures approximately six feet wide by ten feet long. Soils appear to be saturated to a depth of approximately six inches. No organic vapors were detected using PID instrumentation.

Oily/discolored soils adjacent to electrical transformers: Dark grey, oily/sludge-like discolored soils were observed near a bank of electrical transformers located on two power poles south of Building #3. Waste liquids (e.g., motor fluids) and/or sludges appear to have been dumped in this locations for an unknown length of time. The electrical transformers are not labeled as "PCB free." No organic vapors were detected using PID instrumentation.

Oil spots near hay shed: Motor oils and fluids appear to have been drained directly from vehicles/equipment directly onto soils at several locations in this area. Soils are discolored dark black, and vary in size. Some of the "oil spots" measure approximately eight feet in diameter. No organic vapors were detected using PID instrumentation.

Floor drain/sediment trap on north end of Building #3. An exterior floor drain/sediment trap is located immediately before a large drive-through shop door on the north side of Building #3. The floor drain appears to contain approximately six to eight inches of sediment. Metal working and equipment repair activities take place near the floor drain. Several broken lead-acid batteries are located near the exterior of the building and up-gradient of the floor drain/sediment trap. No organic vapors were detected using PID instrumentation.

Miscellaneous Discarded Lead-Acid Battery Locations: Lead-acid batteries were observed at several locations. The batteries appear to be discarded, and do not appear to be stored for safe-keeping or recycling purposes. The locations discussed below, are where two or more batteries were noted as being improperly stored/contained, casings were broken, and contents appear to have leaked. In addition to these locations, single batteries were observed discarded at several other locations. In most cases, the batteries were in poor condition. PID field-screening was not conducted in association with the discarded battery locations.

Batteries located between Buildings #3 and #4: Three batteries are located in the weeds adjacent to a power pole between Buildings #3 and #4.

Batteries located in and near the drum storage area: Several batteries were observed in and near the drum storage area.

Batteries located in scrap metal storage area: Approximately thirty batteries are located in the metal storage area located north of Building #3. The batteries are improperly stored. Many have broken casings, and the contents appear to have leaked. Lead plates from the interior of a battery are scattered over the ground at one location.

Trash and Debris Disposal Area: A trash and debris disposal area is located north and west of the main shop area. The trash/debris pile measures approximately 90 feet long, 35 feet wide, and 8 feet high. This area appears to have been used for several years as a disposal area for trash and debris generated from the machine shop operations. The contents of the disposal area also appear to have been burned on several occasions. Based on visual observations of the disposal area, contents of the trash area include 55-gallon drums, buckets (assorted sizes), miscellaneous containers, household trash, tires, scrap metal, wood, engine parts, etc. No organic vapors were detected using PID field-screening instrumentation at this location.

Small Electrical Transformer Located in Scrap Metal Storage Area: What appears to be a small electrical transformer was discovered in the debris in the scrap metal storage area. The suspected transformer measures approximately six inches in diameter and twelve inches long. It is not known if the transformer contains dielectric fluid. There is no indication which suggests that the contents of the transformer has leaked or been released. PID field-screening was not conducted at this location.

Drum Storage Area: A drum storage area is located in the northwest corner of MS-00685-CS. Approximately sixty 55-gallon drums and thirty 5-gallon buckets are currently stored in this location. Most of the drums are full of unknown liquids. According to Mr. Young, many of the drums contain waste motor oils that were drained during the process of repairing mining and heavy equipment. Mr. Young stated that the drums containing waste oils are only stored in this area temporarily. Mr. Young also indicated that the waste oils are burned in an oil-burning furnace located in the repair shop, to provide heat during the winter months. Visual observations of the drum storage area indicate that most of the drums are partially full or full. However, labeling observed on the drums indicate that some of the drums may contain liquids/wastes other than waste oil. Drums were labeled as containing motor oil (i.e., TDH oil), hydraulic fluid, industrial coatings (paint), carburetor cleaner, solvents, etc.. The contents of the drums appear to have been leaking at this location for an extended period of time. Several drums were tipped over, and the contents appear to have leaked onto the ground surface. In many locations, soils surrounding the drums are saturated with what appears to be a waste oil liquid. Soils are discolored a dark black. In several locations, soils were saturated to the extent that the waste liquid could no longer soak or leach into the soils, rather the liquid was pooling on the ground surface. Efforts to store the drums in secondary containment structures have not been made. There was no evidence (i.e., moving old drums out and new drums in; tire tracks; disturbed soils, etc.) to support the owner's claim that the drums are routinely used for heating purposes. PID readings of soils saturated with liquid waste materials were in the 5 ppm to 10 ppm range. Oily/petroleum-like odors (and other unidentifiable odors) are distinct in this area.

In addition to waste oil materials, an orange-colored liquid was observed on the surface of the black discolored, saturated soils. The liquid was uncharacteristic of the waste oil materials that were observed in this area. Additionally, a clear liquid appeared to be effervescing (bubbling) from the closed bung on two 30-gallon drums that were observed in this area. A white residue was noted on the surface of each drum. Another 30-gallon drum appeared to be full of hot-tank sludge was also observed in this area.

Abandoned Hot Tanks and Sludge: Two large steel structures measuring approximately four feet wide, four feet tall, and eight feet long were observed immediately north of the scrap metal storage area. The structures appear to be abandoned hot tanks that were previously used to clean/degrease engines and parts. Approximately six to eight inches of dark brown, black sediment was observed in the bottom of each tank. No organic vapors were detected using PID field-screening instrumentation at this location.

4.0 DATA/INFORMATION ANALYSIS

Data and information obtained for each potential area of concern identified during the site assessment of Young's Machine Company is analyzed in this section to determine whether sampling and characterization of each area is warranted. A radiological assessment of this property was completed by DOE on May 13, 1994. Unless specifically noted, the areas suspected to be contaminated with hazardous substances are located in areas which have not been identified as being radiologically contaminated. Recommended follow-up actions for identified areas of concern are discussed in Section 5.0.

4.1 Interior Locations:

Due to the age of the floor drain and drain line located inside the Machine Shop (Building #2), and the corrosive nature of the liquids that have been routinely discharged into the disposal system, it is possible that the floor drain, drain line, and associated plumbing could be leaking. However, detecting leaks beneath the machine shop would require coring through the concrete floor to collect samples. As a last recourse, this action may be necessary. However, prior to initiating such intrusive actions and disrupting operations, it is recommended that samples be collected from sediments that may be potentially contaminated with liquid waste effluent from the Machine Shop. Such sediments may be found in the sediment trap located immediately outside Building #2, and in the surface impoundments, to which the floor drain is discharged. No other interior locations were noted as being potentially contaminated with SHS; therefore, no characterization activities are recommended for interior locations.

4.2 Exterior Locations

Machine Shop Waste Effluent Disposal Area:

Based on the information obtained during the Site Assessment process (i.e., historical and process knowledge), liquid waste effluents are known to have been discharged (i.e., released to the environment) at this location. The hot tank degreasing processes which discharge wastes to this area are known to use caustic solutions. Previous "cold tank" degreasing processes could have used hazardous degreasing solvents (e.g., methylene chloride). Liquid effluents from the machine shop have been discharged at this location since the early 1960's (approximately thirty years). Soils are locally saturated with contaminants from the liquid waste effluent; and it is suspected that both soils and groundwater downgradient of the disposal area may also be contaminated. These media may be contaminated with volatile organic compounds (VOCs) (specifically, organic solvents), semi-volatile organic compounds (semi-VOCs), and heavy metals (as cited on the Priority Pollutant List [PPL]). In addition, the soils and groundwater may also exhibit alkaline/caustic characteristics. Data resulting from the radiological assessment of this property, also identifies this area as being radiologically contaminated. This location is considered an area of concern. Recommendations for characterizing this location are presented in Section 5.0.

Machine Shop Waste Effluent Sediment Trap:

This sediment trap is another component of an active liquid waste disposal system. Sludges/sediments observed at this location are saturated with effluent from the machine shop floor drain. The sludges/sediments at this location may be contaminated with VOCs (specifically, organic solvents), semi-VOCs, and heavy metals. In addition, these material may also exhibit alkaline/caustic characteristics. It is not known if this sediment trap is a water tight structure; as a result, the sediment trap is a potential source whereby contaminants in the waste effluent could also be released to the environment. This location is considered an area of concern. Recommendations for characterizing this location are presented in Section 5.0.

Equipment Painting, Sandblasting, and Washing Alley:

Wastes resulting from the sandblasting, and equipment painting/washing activities that are conducted in this area, are either washed into the storm drain and discharged with the machine shop liquid effluent wastes at the surface impoundment south of the machine shop; or these wastes are washed/swept onto the soils at the south edge of the concrete. These soils may be contaminated with VOCs, semi-VOCs, and heavy metals. As a result, this location is considered an area of concern. Recommendations for characterizing this location are presented in Section 5.0.

Vehicle Wash Drain Line:

Although discolored (oily) soils were observed immediately below the terminus of the pipe, the areal extent of discolored soils appear to be relatively minimal (approximately four square feet). According to the owner, this is a drain line from a former vehicle washing station. The area now consists of a concrete pad, and is used strictly for parking. Effluent does not appear to be discharged routinely from this pipe. Based on the known historical use of this drain line and the limited amount of soil discoloration, this location is not considered to be a past or current source of contamination. Consequently, this location is not considered an area of concern.

Miscellaneous Discolored Soils:

Numerous locations of discolored soils were noted during the site inspections of the property. Most of these locations appear to be oil stains resulting from maintenance of, or leaking vehicles and equipment. Due to the relatively small volume of most of the discolored areas, most locations are not considered to present an unacceptable risk to human health and the environment. However, several locations are considered areas of concern due either to the visible extent of discoloration, or other factors (e.g., proximity to transformers potentially containing PCBs, soil texture, stressed vegetation, etc.). These areas of concern are described below. Recommendations for characterizing these locations will be presented in Section 5.0.

Unknown grey/black sediments south of machine shop: In contrast to most of the discolored soils on this property, the suspect material at this location does not have an oily appearance. The material is described as a dark grey to black in color with a fine-grained texture. The material varies from a powdery to sludge-like appearance. The material appears to have

been deposited/dumped on the crest of the embankment immediately south of the machine shop. The dimensions of this deposit measures approximately ten feet long by twelve feet wide; the depth of the deposit is unknown. The machine and/or repair shop are the closest logical sources for the waste material. Heavy metals, semi-VOCs, and VOCs are the primary suspect contaminants. Due to the unknown nature of the material, it is not known whether this material presents risk to human health and the environment, and therefore; is considered an area of concern.

Oil spots near heavy equipment: Several large areas of discolored, oily soils are located underneath, and next to mining equipment that is parked south of the machine and repair shops. Motor oil and/or hydraulic fluid appears to have been recently drained or leaked directly onto the soils at this location. The largest area of discoloration measures approximately six feet wide by ten feet long. Soils appear to be saturated to a depth of approximately six inches. Due to the volume of discolored soils, and the degree of saturation at this location, this area is considered an area of concern. Heavy metals, VOCs (i.e., chlorinated solvents, BETXN constituents, etc), and semi-VOCs are the primary contaminants of concern. Because this property was in operation when PCBs were commonly used in various industrial fluids/oils (between 1950 and 1972), PCBs are potential contaminants on this property. Therefore, PCBs should be suspected for releases of industrial oils/fluids which are suspected or known to have occurred within, or near that time period. Since the release of oil at this location appears to have recently occurred (within the past year), PCBs are not a concern at this location. Data resulting from the radiological assessment of this property, identifies this area as being radiologically contaminated.

Oily/discolored soils adjacent to electrical transformers: Oily soils and sludge-like materials were observed on the crest of the embankment immediately south of the repair shop (Building #3). Discolored soils in this area extend from the top of the embankment, to a bank of electrical transformers located approximately fifteen feet to the south. The electrical transformers are not labeled as "PCB free." The transformers are active and appear to be in good condition. Waste liquids (e.g., motor fluids) and/or sludges appear to have been dumped at this location for an extended period of time. Based on visual observations of this area during the site assessment, and the proximity of this area to both the machine and repair shops, and the overhead electrical transformers, this area is considered to be an area of concern. Potential contaminants at this location include PCBs, heavy metals, VOCs, and semi-VOCs. Data resulting from the radiological assessment of this property, identifies this area as being radiologically contaminated.

Oil spots near hay shed: Motor oils and fluids appear to have been drained directly from vehicles/equipment directly onto soils at several locations in this area. Soils are discolored dark black, and vary in volume. Some of the "oil spots" measure approximately eight feet in diameter. Due to the apparent volume of discolored, oily materials observed in this area, this location is considered an area of concern. Heavy metals, VOCs (i.e., chlorinated solvents, BETXN constituents, etc), semi-VOCs, and PCBs are the primary contaminants of concern.

Floor drain/sediment trap on north end of Building #3.

The floor drain appears to be an enclosed, concrete structure with no inlet or outlet. Although contaminants may be transported by storm water, equipment, etc., into the floor drain/sediment trap, the structure and the sediments inside it, are not considered potential source of contamination. Consequently, this location is not considered an area of concern.

Miscellaneous Discarded Lead-Acid Battery Locations:

Several locations were noted at the property where multiple lead-acid batteries have been discarded. In general, the batteries are improperly stored/contained, and are in poor condition. Many of the batteries appear to have broken cases, and the contents have leaked. Areas of concern where multiple batteries have been apparently discarded include:

- Between Buildings #3 and #4 next to power pole (three batteries observed at one location)
- Drum storage area (approximately six batteries observed at two locations)
- Scrap metal storage area (approximately 30 batteries observed at one location)

The primary contaminants of concern at these locations are heavy metals (lead) and acid soils (low pH). Recommendations for characterizing these locations are presented in Section 5.0.

Trash and Debris Disposal Area:

Based on a visual inspection of the disposal area, and interviews with Mr. Young, trash and debris from the Machine shop operations have been disposed and burned at this location for an extended period of time. Both household- and industrial-type wastes have been disposed at this location. Due to the uncontrolled nature of what may have been disposed at this area, this location is considered an area of concern. Heavy metals, VOCs, semi-VOCs, and PCBs are all potential contaminants at this location. Data resulting from the radiological assessment of this property, also identifies the entire debris pile as being radiologically contaminated. Recommendations for characterizing this location are presented in Section 5.0.

Suspected Electrical Transformer Located in Scrap Metal Storage Area:

An electrical component discovered in the scrap metal storage area was tentatively identified as an electrical transformer, although there is nothing which positively identifies it as such. There is no indication that the suspected transformer contains PCB or dielectric fluid. Based on visual observations of the suspected transformer and the area immediately surrounding it, there is no evidence which indicates that a release of any liquid material from this object has occurred. Therefore, this location is not considered an area of concern. However, as a best management practice, recommendations to containerize this object for safekeeping will be made in Section 5.0 of this document.

Drum Storage Area:

Based on visual observations of this area during previous site inspections, many of the drums and containers stored at this location have leaked, or are currently leaking. Soils at several locations are stained and saturated with the contents which have been released from the drums. Areas of discolored, saturated soils measure up to thirty feet in diameter. Soils may

be contaminated up to depths of twenty-four inches. Most of the drums are either full or partially full. Heavy metals, VOCs, semi-VOCs, and PCBs are all potential contaminants at this location. Data resulting from the radiological assessment of this property, also identifies portions of this area as being radiologically contaminated. Recommendations for characterizing this location are presented in Section 5.0.

Abandoned Hot Tanks and Sludge:

Two abandoned parts cleaning tanks are located north of the scrap metal storage area. Each tank contains approximately six to eight inches of sludge/sediment. Although the sludge and sediment inside the tanks may contain hazardous/toxic concentrations of contaminants, there is no indication that the contents of the tanks have been released to the environment. Therefore, these tanks are not considered an area of concern. However, as a best management practice, recommendations to containerize the sludge for safekeeping purposes will be made in Section 5.0 of this document.

4.3 Underground Storage Tanks

Underground storage tanks are not known to exist on the subject properties.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on information obtained during the Site Assessment process, it is concluded that several of the suspected areas of concern have not released or leaked suspect hazardous substances to the environment. These locations do not warrant further investigation because either: 1) SHSs were determined not to be associated with these locations upon further evaluation; or 2) although SHSs were suspected to be associated with a given location or structure, a release of SHSs to the environment has not occurred. Previously identified areas of concern which do not require additional investigation are as follows:

- Vehicle wash drain line
- Floor drain/sediment trap located on the north end of Building #3
- Suspected electrical transformer in scrap metal storage area
- Abandoned hot tanks and sludge

Hazardous substances may be associated with both the suspected electrical transformer and the sludges in the abandoned hot tanks; however, these structures have not released SHSs to the environment. However, these structures do pose a potential "threat of release," and as such, it is recommended that preventative measures (i.e., best management practices) be taken to prevent a future release. In accordance with guidelines from DOE-GJPO (DOE 1995c), it is recommended that the suspected transformer be placed into a bucket or drum of appropriate size (i.e., new, 30-gallon, DOT approved, 17-H type drum). Similarly, the sludges in the hot tank should be placed inside drum(s) of appropriate size (i.e., new, 55-gallon, DOT-approved, 17-H type drum). All drums will be labeled with the date that the material was placed into the container, the property owner's name, and the assumed contents. All drums will be placed on a wood pallet and left on-site for the property owner to manage. If during remediation, suspect hazardous substance areas are encountered, procedures outlined in Attachment 1, Guidelines for Managing Suspect Hazardous Substances Encountered During Remediation at the Monticello Mill Tailings Site and Vicinity Properties, of the *Special Waste Management Plan for the Monticello Mill Tailings Site and Vicinity Properties* (DOE 1995a) will be implemented.

Based on information obtained during the Site Assessment process, it is concluded that several of the suspected areas of concern have released or leaked suspect hazardous substances to the environment. Consequently, hazardous substance characterization is recommended for the following areas of concern:

- Machine Shop Waste Effluent Disposal Area
- Machine Shop Waste Effluent Sediment Trap
- Equipment Painting, Sandblasting, and Washing Alley
- Miscellaneous Discolored Soils
 - Unknown grey/black sediments south of machine shop
 - Oil spots near heavy equipment
 - Oily/discolored soils adjacent to electrical transformers
 - Oil spots near hay shed

- **Miscellaneous Discarded Lead-Acid Battery Locations**
 - Between Buildings #3 and #4 next to power pole (three batteries observed at one location)
 - Drum storage area (approximately six batteries observed at two locations)
 - Scrap metal storage area (approximately 30 batteries observed at one location)
- **Trash and Debris Disposal Area:**
- **Drum Storage Area:**

A site-specific Sampling and Analysis Plan will be prepared to characterize the areas of concern. A Site Characterization Report will be written to document the results of the sampling activity.

6.0 REFERENCES

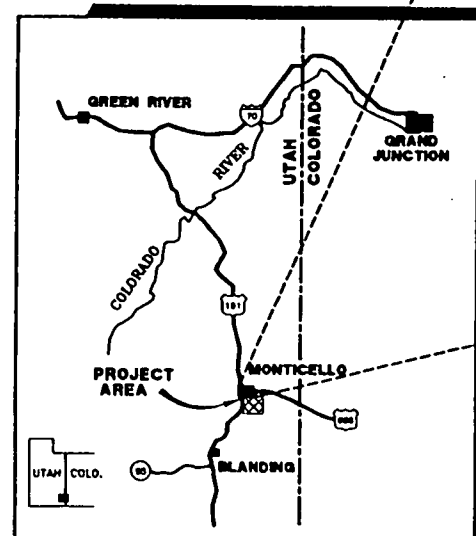
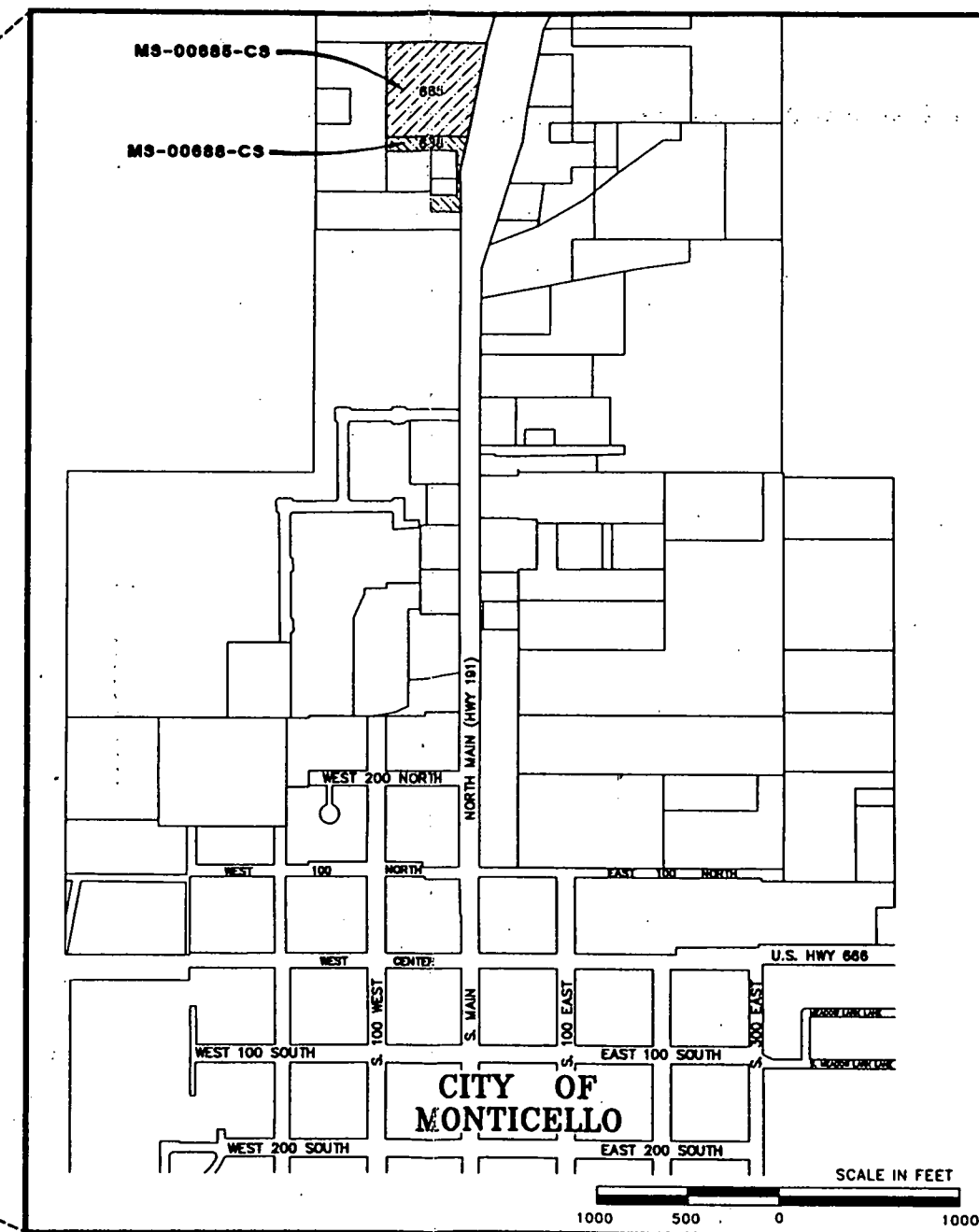
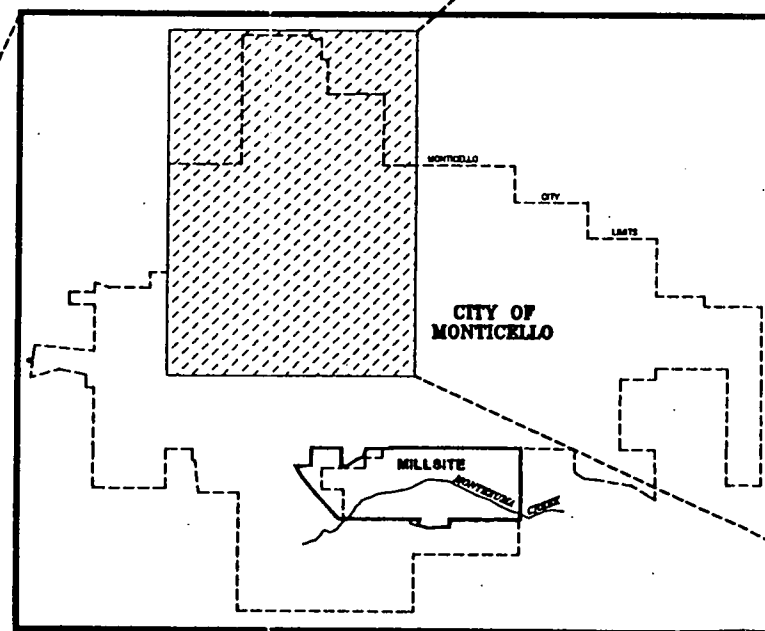
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_____, 1995a. *Monticello Remedial Action Project, Special Waste Management Plan for the Monticello Mill Tailings Site and Vicinity Properties*, P-GJPO-913, prepared by Rust Geotech for the U.S. Department of Energy, Grand Junction Projects Office, Grand Junction, Colorado.

_____, 1995b (continually updated). *Environmental Procedures Catalog* (Manual 116), prepared by Rust Geotech for the U.S. Department of Energy, Grand Junction Projects Office, Grand Junction, Colorado.

_____, 1995c. Telephone Conference Record dated May 19, 1995. Management of Non-radiologically contaminated Liquids from Monticello Peripheral of Vicinity Properties, prepared by Rust Geotech for the U.S. Department of Energy, Grand Junction Projects Office, Grand Junction, Colorado.



This drawing, prepared by Rust Geotech, Inc. for the Monticello Remedial Action Program, is for the sole use of the U.S. Department of Energy and its contractors. It is not a land survey plat or an improvement survey plat, and in not to be relied upon for the establishment of fence, building, or other future improvement lines by the private sector. The property lines shown on this map do not reflect an actual legal boundary survey.

U.S. DEPARTMENT OF ENERGY GRAND JUNCTION PROJECTS OFFICE, COLORADO		
Figure 1 MONTICELLO VICINITY PROPERTY MAP		
PREPARED:	CHECKED:	DATE PREPARED: MAY 30, 1995
PROJECT NUMBER: ECR-034-0025-00-000		FILENAME: A0025900

Attachment 1

Title Search Summary

Geotech ID Number: MS-00685-CS and MS-00688-CS
Property Number: A33230250602 and A33230250608
Property Address: 1149 North Main Street
Owner: Jack Young (Young's Machine Shop)

Book/Page	Transferred From	Transferred To	Date
397-494	Lloyd Adams, et ux.	Young's Machine Shop	4/5/67
397-493	Young's Machine Shop	Lloyd Adams, et ux.	4/4/67
342-61	Lloyd Adams, et ux.	Young's Machine Shop	3/29/62

This property and the adjoining property (A33230250608) were passed back and forth between Lloyd Adams and the Youngs at least ten times between 1949 and 1971. The title was always transferred by warranty deed or quit claim deed with no explanation for the transfers. No mortgages or liens were recorded against the properties. The original instruments were reviewed and there is no indication of dollar amounts or additional agreements that may explain the reasons for the transfers. It does appear that the property has been used exclusively by Young's Machine Shop since at least 1962.

The local newspaper editor stated that Lloyd Adams is not related to the Youngs and that he is now retired in Blanding.

Rental/lease agreements were not recorded on public record.

Attachment 2
Site Assessment Checklist

SITE ASSESSMENT CHECKLIST

DOE ID Number/Property Name MS-00685-CS and MS-00688-CS / Young's Machine Co.Owner Name(s) Mr. Jack N. Young Date Purchased 1957Previous Owner(s) Lloyd Adams Date Purchased -NA-Attendees: Mike GARDNER, Larry SPENCER, Mack Cobb, Mark Dalley, Mark Wilson, Harland Stosich

Site Walk-Through Checklist

- X 1. Inspect radiologically contaminated areas, noting suspect areas/sources of hazardous waste (reconfirmation of radiologic contamination areas may be appropriate)
- X 2. Inspect the remainder of the property with emphasis on:
- ☒ a. Drums, containers or sacks of chemicals (record size, condition, labels)
 - ☒ b. Stains soil (record size for areas, color, relative staining, probable source)
 - ☒ c. French drains, open drains, trenches, pits, ponds, or lagoons
 - ☒ d. Equipment and salvage stockpiles for condition and leakage
 - ☒ e. Dead or stressed vegetation
 - ☒ f. Pesticides, paints or other chemicals in individual containers of greater than 5 gal. in volume or 50 gal. in the aggregate
 - None g. Above ground storage tanks or vent pipes, fill pipes, access ways indicating a fill pipe protruding from the ground or adjacent to any structure located on the property indicating the possible presence of an underground tank
 - ☒ h. Transformer, capacitor or any hydraulic equipment
 - ☒ i. Unidentified waste material, tires, automotive or industrial batteries (dumped, buried or burned)
 - None j. Friable asbestos materials improperly discarded or stored (e.g., pipe, duct, and boiler coverings; insulation, floor tiles, siding, roofing materials; fire-proofing from walls and ceilings; duct linings; heat reflectors)
 - None k. Chemical odors emanating from the septic system (tank area or leach field)
 - ☒ 1. Cut and fill areas or areas of subsidence
- X 3. Field Screening
- a. PID readings (readings/locations) 5 ppm to 10 ppm in drum storage area. Organic vapors were not detected at any other location.
 - b. PCB test sample location(s)/results PCB field screening not conducted.
- X 4. Does anyone reside on the property or adjacent to it? (Yes or No)
- X 5. Is the property suitable for habitation? (Yes or No)
- X 6. Document observations with photos and/or videocamera.
- X 7. Identify potentially sensitive environmental receptors (e.g., surface waters, wetlands, water supplies, food supplies)
- No 8. Additional Samples Collected (location[s] and analysis[es] requested)

The following locations were noted as potential areas where hazardous substances/contamination may be present:

Area #1: Open sump, waste water disposal area located south of Machine Shop

Area #2: Terminus of drain line from former car wash.

Area #3: Several areas of discolored oily soils were noted on crest of embankment south of Machine Shop.

Area #4: Discolored soils at end of alleyway (between shop and warehouse buildings).

Area #5: Discolored soils adjacent to power poles south of repair/warehouse building. Transformers on power poles were not labeled as "POB Free."

Area #6: "Coal" pile located on west side of repair/warehouse building. Sludge-like materials also noted in this area.

Area #7: Five lead-acid batteries noted on pallet

Area #8: Two batteries with cracked casings found in weeds on north side of repair shop.

Area #9: Oily, discolored soils noted near hay stack/corral on west side of building.

Area #10: Trash and debris pile on west side of property. Area appears to have been burned.

Area #11: Drum storage area containing approximately 60-80 drums. Soils are saturated with what appears to be waste oil. Approximately 60-70 5-gallon buckets also noted here.

Area #12: Scrap Metal Storage area.

Area #13: Discarded "parts-cleaning" tanks. Two tanks observed, both containing sludge-like materials in bottom.

Area #14: Brick-Emble pile. Possibly used in reactor even during Uranium/Vanadium milling process??

SITE ASSESSMENT CHECKLIST CONTINUED

Interview Checklist (Commence with explanation of purpose of interview)

Interviewee(s): (position, length of employment or ownership)

Mr. Jack N. Young, Owner. Mr. Young has been employed at
Young's Machine Company since 1965. Purpose of site inspection
is to determine if site activities have resulted in a release of non-radiological
hazardous substances to the environment.

Owner or Representative Interview Checklist (Information provided to the best of their knowledge)

- X 1. Property history and primary use (include information on activities prior to current ownership)
- X 2. Disposal practices including current or previous presence of dry wells, french drains, open drains, trenches, pits, ponds or lagoons located on the property used in connection with waste treatment or waste disposal, or discharge of wastewater on or adjacent to the property other than storm water into a sanitary sewer system.
- X 3. Source of suspect contamination (hazardous substances or petroleum products, unidentified waste materials, tires, automotive or industrial batteries; pesticides, paints, other chemicals or cleaning solutions in individual containers of greater than 5 gallons in volume or 50 gallons total.
- X 4. Other potential waste streams (e.g., upgradient groundwater well used for disposal)
- X 5. Current or former storage or use of the following: drums; transformers, capacitors, or hydraulic equipment; damaged or discarded automotive or industrial batteries; pesticides, paints, other chemicals or cleaning solutions in individual containers of greater than 5 gallons in volume or 50 gallons total.
- X 6. Current or former disposal on site of asbestos-containing materials (e.g., pipe, duct and boiler coverings; insulation; floor tiles; siding; roofing materials; fire-proofing from walls and ceilings; duct linings; heat reflectors).
- X 7. Current or previous presence and source of stained soil.
- X 8. Fill dirt brought onto the property.
- X 9. Current or previous presence of registered or unregistered storage tanks (above or underground), vent pipes, fill pipes, or access ways indicating a fill pipe protruding from the ground on the property or adjacent to or on the roof of any structure located on the property.
- X 10. Presence and location of active or inactive septic tanks and leach fields, date of installation, and date of last clean-out.
- X 11. Current or previous presence of any flooring, drains, or walls located within the facility that tar stained by substances other than water or are emitting foul odor.
- X 12. If private well or non-public water system, contaminants identified in the well or system that exceed guidelines or where the well has been designated as contaminated by any government environmental/health agency.
- X 13. Adjoining property currently or formally used for an industrial use (i.e., gasoline station, motor repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing or recycling facility).

Interview Notes

MS-00685-CS
DOE Number MS-00688-CS

Date 10-26-93

10-20-73

① First Building was built by Mr. Young's father and under in 1957. Other buildings have been added over the years. The large repair shop/hangar building was part of the Mexican Hat uranium mill. The insulation on the walls was extremely radioactive. Mr. Young has since scrapped most of it off, and has welded large sheets of metal plate on the interior to serve as added protection to employees from residual radiation hazards inside the building. Prior to Youngs acquiring the property, the land was unimproved vacant ground which was occasionally used for cattle grazing purposes. Boyles Brothers Drilling Company used the property to the south and west for employee housing (Trailer Park) and equipment/drill rig storage.

② Mr. Young indicated that the sanitary/domestic sewage for the Machine Shop is discharged to a septic system. The septic system is located off the property to the west. Mr. Young stated that industrial or process wastes are not disposed of into this septic system. Waste water from the Machine Shop however is discharged through a floor drain and into several 55-gallon drums located south of the shop. Mr. Young indicated these wastes are pumped several times a year by a septic cleaning/pumping service. Mr. Young also noted that a drain line from a former vehicle/equipment washing station is located south of the Machine Shop. This area is no longer used to wash vehicles. It is now part of the employee parking area.

③ Mr. Young provided information on chemicals used in degreasing tanks; an MSDS will be provided at a later date. When asked about the materials stored in the 55-gallon drum storage area, Mr. Young indicated that waste motor oil is stored in drums at this site and later is burned in oil-burning furnaces for heat in the repair shop during the winter time. When asked about the contents of the burned trash pile, Mr. Young replied that unsalvageable wastes from the Machine Shop are discarded at this location and the pile is burned down several times a year. According to Mr. Young, salvageable materials are recycled or sold to scrap yards periodically. This includes lead-acid batteries, aluminum, copper, etc. According to Mr. Young, pesticides/herbicides are not routine used or disposed at the property.

④ No other sources of waste disposal (beyond those indicated above) were noted. A water well is located on the property, but is not used as a potable source of water due to the high iron content in the water.

Interview Notes

NS-00685-CS

DOE Number NS-00688-CS

Date 10-26-93

- ⑤ A large drum storage area is located on the north-west portion of the property. Approximately 60 55-gallon drums and 30 5-gallon buckets are stored at this location. Many of the drums appear to be leaking. Mr. Young indicated that automotive/equipment batteries are stockpiled in the scrap metal storage area.
- ⑥ Mr. Young was unaware of asbestos wastes / materials either stored or disposed at the property.
- ⑦ See items # 2 and # 5 above.
- ⑧ Mr. Young does not recall undertaking any cut and fill activities at this site.
- ⑨ According to Mr. Young, there are no underground storage tanks located on the property. There is an above-ground diesel tank located in the alleyway between the Machine Shop and the repair shop / warehouse building. Mr. Young indicated that the tank is no longer used.
- ⑩ As indicated in item # 2, the Machine Shop is hooked up to an off-site septic system (located west of the property). Mr. Young did not know when the system was installed.
- ⑪ The interiors of buildings were not thoroughly inspected for potential hazardous substance contamination. The purpose of the site visit was to inspect exterior portions of the property only. Mr. Young explained that the shop and employees were extremely busy, and that he preferred that we come back another time if we needed to inspect the interiors of the buildings.
- ⑫ Mr. Young indicated that water used in the Machine Shop is supplied by the City of Monticello.
- ⑬ Adjacent properties are currently used either for residential, or agricultural purposes (ie cattle grazing).

Attachment 3

Material Safety Data Sheets for Product Used in Hot Tank Degreasing Activities

YOUNG'SP.O. BOX 489
1149 NORTH MAIN
MONTICELLO, UTAH 84535**MACHINE COMPANY**

COMPANY:

Rust Geotech

DATE: 06/01/95

DELIVER TO:

Mike Gardner

PAGES:

4

FROM:

Mike - Hope this is what you
wanted - if not please let me know -

Thanks - Have a great day!

JACK

MATERIAL SAFETY DATA SHEET 04-01-95

PAGE 1 OF 3

CUSTOMER NAME AND ADDRESS

MANUFACTURER'S NAME AND ADDRESS

C-C DISTRIBUTING
P.O. BOX 12366
OGDEN, UTAH 84401

EMERGENCY PHONE(S) 1-800-251-1223 OR CHEMTREC 1-800-424-9300

SECTION 1 - IDENTITY

COMMON NAME USED ON LABEL - TANK CLEAN ALUMINIUM SAFE

HAZARD RATING (NFPA 49)

CHEMICAL FAMILY - POWDER BLEND

HEALTH: 2 FIRE: 0

REACTIVITY: 2

SPECIAL: 1

HAZARD RATING SCALE: 0=MINIMAL 1=SLIGHT 2=MODERATE 3=SERIOUS 4=SEVERE

SECTION 2- HAZARDOUS INGREDIENTS (AS PER TITLE 29 CFR 1910.1200)

PRINCIPAL COMPONENT(S)	%	OSHA TWA	ACGIH STEL	OTHER LIMIT	HAZARD
------------------------	---	-------------	---------------	----------------	--------

NON-HAZARDOUS COMPONENTS:

SODIUM BICARBONATE (20%)

CAS#144-55-6

SODIUM METASILICATE (50%)

CAS #6834-92-0

SECTION 3-PHYSICAL & CHEMICAL CHARACTERISTICS (FIRE & EXPLOSION DATA)

BOILING POINT (DEG. F)= N/A

PH= N/A

SPECIFIC GRAVITY= N/A

% VOLATILE BY VOL.= N/A

VAPOR PRESSURE at 20(DEG F)= N/A

VAPOR DENSITY (AIR =1) N/A

EVAPORATION RATE(n-BUTYL ACETATE=1) N/A

SOLUBILITY IN WATER: APPRECIABLE

REACTIVITY IN WATER\HEAT EVOLUTION

FLASH POINT (DEG F)= N/A

APPEARANCE & ODOR - GRANULAR

AUTO IGNITION TEMPERATURE (DEG. F)= N/A

FLAME EXTENSION - N/A

FLAMMABLE LIMITS BY VOLUME IN AIR: LOWER - N/A

UPPER -

EXTINGUISHER MEDIA - N/A

SPECIAL FIRE FIGHTING PROCEDURES - N/A

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE

SECTION 4 - PHYSICAL HAZARDS

STABILITY - STABLE

POLYMERIZATION - N/A

CONDITIONS TO AVOID: Flammable hydrogen gas may be produced on prolonged contact with metals such as aluminum, tin, lead, and zinc. Generates heat while dissolving. Mixing with small amounts of water may cause violent spattering.

MATERIALS TO AVOID: Concentrated acids.

HAZARDOUS DECOMPOSITION PRODUCTS: None

SECTION 5 - HEALTH HAZARDS

PRIMARY ENTRY ROUTES:

SIGNS AND SYMPTOMS OF OVEREXPOSURE:

EYE CONTACT: CORROSIVE-CAUSES BURNS

SKIN CONTACT: CORROSIVE-CAUSES BURNS

INHALATION: CORROSIVE- CAUSES BURNS TO RESPIRATOR TRACT.

SWALLOWED: HARMFUL OR FATAL IF SWALLOWED

CHRONIC EFFECTS OF EXPOSURE: NONE KNOWN

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: SKIN DISEASES, EYE IRRITATION, OR ASTHMA AND LUNG DISEASE.

SECTION 5 - HEALTH HAZARDS CONTINUED

LISTED CARCINOGEN: NO

EMERGENCY FIRST AID PROCEDURES:

1) INHALATION: REMOVE TO FRESH AIR

2) EYES: FLUSH WITH WATER FOR FIFTEEN MINUTES AND SEEK MEDICAL ATTENTION.

SKIN: FLUSH WITH WATER FOR FIFTEEN MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. SEEK MEDICAL ATTENTION.

INGESTION: GIVE LARGE QUANTITIES OF WATER. GIVE AT LEAST ONE OUNCE OF VINEGAR IN EQUAL AMOUNTS OF WATER. NEVER GIVE ANYTHING TO A UNCONSCIOUS PERSON. CALL A PHYSICIAN.

SECTION 6 - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION - USE NIOSH APPROVED DUST RESPIRATOR WHERE DUST OCCURS.

LOCAL VENTILATION - USE WITH MECHANICAL VENTILATION OR IN A WELL VENTILATED AREA.

EYE PROTECTION: SAFETY GOGGLES AND FACE SHIELD

SPECIAL - WASH THOROUGHLY AFTER HANDLING.

PROTECTIVE GLOVES - RUBBER GLOVES

OTHER PROTECTIVE CLOTHES/EQUIPMENT -

SECTION 7 - SPECIAL PRECAUTIONS AND SPILL/LEAK INFORMATION

HANDLING AND STORAGE - KEEP CONTAINER CLOSED AND STORE AWAY FROM ACIDS.

OTHER PRECAUTIONS-

SPILL/RELEASE - SWEEP, SCOOP, OR VACUUM DISCHARGED MATERIAL.

WASTE DISPOSAL - NEUTRALIZE WITH DILUTED ACID AND LANDFILL SOLIDS ACCORDING TO LOCAL, STATE, AND FEDERAL REGULATIONS. FLUSH NEUTRAL LIQUID TO SEWER WITH PLENTY OF WATER.

*** ACTIVITY REPORT ***

RECEPTION OK

TX/RX NO. 6373

CONNECTION TEL 8015872312

CONNECTION ID

START TIME 06/01 15:51

USAGE TIME 02'44

PAGES 4

RESULT OK



Distributing

EFFECTIVE 1 JANUARY 1989, C-C DISTRIBUTING, INC. IS REQUIRED TO INFORM YOU THAT THIS PRODUCT CONTAINS A HAZARDOUS SUBSTANCE SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION OF 1986 (SARA) AND CFR PART 372.65.

* * * TANK CLEAN 3009

Date: 05/22/89
Trade Name: Tank Clean 3009
Chemical Name/Synonyms: Anhydrous Sodium Hydroxide, Caustic Soda, Sodium Hydroxide, Sodium Metasilicate.
Chemical Family: Alkali
Formula: Proprietary
U.S. DOT Hazard Class: Corrosive Material
Subsidiary Risk: N/A

SECTION 1 * PHYSICAL DATA

Boiling Point @ 760 MM HG: 1390°C
Vapor Density (Air=1): N/A
Specific Gravity (H2O=1): 2.130
PH of Solutions: Strongly Basic
Freezing/Melting Point: 310-320°C (590-608°F)
Solubility (Wt. % In Water): Appreciable
Volume % Volatile: N/A
Vapor Pressure: N/A
Evaporation Rate: N/A
Heat of Solution: Exothermic
Appearance and Odor: White to Slightly Colored Granules. No Odor

SECTION 2 * INGREDIENTS

<u>MATERIAL</u>	<u>PERCENT</u>
Sodium Metasilicate	45%
Sodium Hydroxide	40%

SECTION 3 * FIRE/EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED):
None

* * * 24-HOUR EMERGENCY ASSISTANCE: (304) 843-1300 * * *

FLAMMABLE LIMITS IN AIR (% BY VOLUME)

LEL: N/A

UEL: N/A

EXTINGUISHING MEDIA:

NOT APPLICABLE

SPECIAL FIRE FIGHTING PROCEDURES:

NONE

UNUSUAL FIRE AND EXPLOSION HAZARDS:

CONTACT WITH SOME METALS PARTICULARLY MAGNESIUM, ALUMINUM AND ZINC (GALVANIZED) CAN RAPIDLY GENERATE HYDROGEN, WHICH IS EXPLOSIVE.

SECTION 4 * HEALTH HAZARD DATA

TOXICITY DATA:

LC50 INHALATION: SEE SECTION 5

LD50 DERMAL: SEE SECTION 5

SKIN/EYE IRRITATION: SEE SECTION 5

LD50 INGESTION: SEE SECTION 5

FISH, LC50 (LETHAL CONCENTRATION): UNKNOWN

CLASSIFICATION: (POISON, IRRITANT, ETC.)

INHALATION: IRRITANT

SKIN: SEE SECTION 5

SKIN/EYE: CORROSIVE

INGESTION: CORROSIVE

AQUATIC: UNKNOWN

SECTION 5 * EFFECTS OF OVEREXPOSURE

THIS SECTION COVERS EFFECTS OF OVEREXPOSURE FOR INHALATION, EYE/SKIN CONTACT, INGESTION AND OTHER TYPES OF OVEREXPOSURE INFORMATION IN THE ORDER OF THE MOST HAZARDOUS AND THE MOST LIKELY ROUTE OF OVEREXPOSURE.

IS CHEMICAL LISTED AS A CARCINOGEN OR POTENTIAL CARCINOGEN?

NTP - NO IARC - NO OSHA - NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

NONE KNOWN

PERMISSIBLE EXPOSURE LIMITS:

OSHA: 2 MG/CU.M. CEILING, 29 CFR 1910.1000 (REV. 3/1/89).

ACUTE:

EYE CONTACT: CAUSES SEVERE BURNS; SMALL QUANTITIES CAN RESULT IN PERMANENT DAMAGE AND/OR LOSS OF VISION.

SKIN CONTACT: CORROSIVE ACTION CAUSES BURNS AND FREQUENTLY DEEP ULCERATION WITH SUBSEQUENT SCARRING. PROLONGED CONTACT DESTROYS TISSUE. DUST OR MIST FROM SOLUTIONS CAN CAUSE IRRITANT DERMATITIS.

INGESTION: INGESTION EITHER IN SOLID OR LIQUID FORM CAN CAUSE VERY SERIOUS DAMAGE TO THE MUCOUS MEMBRANES OR OTHER TISSUES WITH WHICH CONTACT IS MADE, AND MAY BE FATAL.

INHALATION: INHALATION OF DUSTS OR MISTS CAN CAUSE DAMAGE TO THE UPPER RESPIRATORY TRACT AND TO THE LUNG TISSUE DEPENDING ON SEVERITY OF EXPOSURE. EFFECTS CAN RANGE FROM MILD IRRITATION OF MUCOUS MEMBRANES, SEVERE PNEUMONITIS AND DESTRUCTION OF LUNG TISSUES.

CHRONIC:

THE EFFECTS OF LONG-TERM, LOW-LEVEL EXPOSURES TO THIS PRODUCT HAVE NOT BEEN DETERMINED. SAFE HANDLING OF THIS MATERIAL ON A LONG-TERM BASIS SHOULD EMPHASIZE THE AVOIDANCE OF ALL EFFECTS FROM REPETITIVE ACUTE EXPOSURES.

*** EMERGENCY AND FIRST AID PROCEDURES**

INHALATION:

REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH-TO-MOUTH. IF BREATHING IS DIFFICULT, GIVE OXYGEN. CONTACT A PHYSICIAN.

EYE OR SKIN CONTACT:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. HOLD EYELIDS OPEN DURING THIS FLUSHING WITH WATER. CALL A PHYSICIAN. IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER WHILE REMOVING CONTAMINATED CLOTHING AND BOOTS. CALL A PHYSICIAN. IF SKIN FEELS SLIPPERY, CAUSTIC MAY STILL BE PRESENT IN SUFFICIENT QUANTITIES TO CAUSE RASH BURN. CONTINUE WASHING UNTIL SLICK SKIN FEELING IS GONE. THOROUGHLY CLEAN CONTAMINATED CLOTHING AND BOOTS BEFORE REUSE OR DISCARD.

* * * 24-HOUR EMERGENCY ASSISTANCE: (304) 843-1300 * * *

INGESTION:

IF CONSCIOUS, DRINK LARGE QUANTITIES OF WATER OR ACIDIC BEVERAGES (TOMATO OR ORANGE JUICE, CARBONATED SOFT DRINKS). DO NOT INDUCE VOMITING. TAKE IMMEDIATELY TO A HOSPITAL OR PHYSICIAN. IF VOMITING OCCURS, ADMINISTER ADDITIONAL WATER. IF UNCONSCIOUS, OR IN CONVULSIONS, TAKE IMMEDIATELY TO A HOSPITAL. DO NOT ATTEMPT TO INDUCE VOMITING OR GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

NOTES TO PHYSICIAN (INCLUDING ANTIDOTES):
TREAT SYMPTOMATICALLY.

SECTION 6 * REACTIVITY DATA

STABILITY: STABLE

CONDITIONS TO AVOID: CONTACT WITH MATERIALS LISTED BELOW

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS TO AVOID: NONE

INCOMPATIBILITY (MATERIALS TO AVOID):

ORGANIC MATERIALS AND CONCENTRATED ACIDS MAY CAUSE VIOLENT REACTIONS;
CAUSTIC SODA REACTS WITH MAGNESIUM, ALUMINUM, ZINC (GALVANIZED), TIN,
CHROMIUM, BRASS AND BRONZE GENERATING HYDROGEN WHICH IS EXPLOSIVE.

HAZARDOUS DECOMPOSITION PRODUCTS:

REACTION WITH VARIOUS FOOD SUGARS MAY FORM CARBON MONOXIDE.

SECTION 7 * SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS SPILLED OR RELEASED:

ONLY TRAINED PERSONNEL EQUIPPED WITH NIOSH/MSHA APPROVED, FULL FACEPIECE COMBINATION DUST/MIST AND ACID GAS RESPIRATORS SHOULD BE PERMITTED IN AREA. FOR DRY MATERIAL, USE APPROPRIATE METHODS, SHOVELS, BROOMS, AND VACUUMS TO CLEAN UP THE SPILL. IF MIXED WITH WATER, OR LIKELY TO BECOME MIXED WITH WATER OR ANY LIQUID, DIKE AREA TO CONTAIN SPILL. RECLAIM IF POSSIBLE. OR, DILUTE SPILL WITH LARGE AMOUNTS OF WATER THEN NEUTRALIZE WITH DILUTE ACID. USE VACUUM TRUCK TO PICK UP NEUTRALIZED MATERIAL FOR PROPER DISPOSAL. PROPERLY NEUTRALIZED LIQUID RESIDUES (PH 6 TO 9) MAY BE DISPOSED OF IN WASTE WATER TREATMENT FACILITIES WHICH ALLOW THE DISCHARGE OF NEUTRAL SALT SOLUTIONS. AFTER ALL VISIBLE TRACES HAVE BEEN REMOVED, FLUSH AREA WITH LARGE AMOUNTS OF WATER.

WASTE DISPOSAL METHOD:

PPG RECOMMENDS DISPOSAL OF DRY RESIDUES IN AN APPROVED HAZARDOUS WASTE MANAGEMENT FACILITY. CARE MUST BE TAKEN WHEN USING OR DISPOSING OF CHEMICAL

* * * 24-HOUR EMERGENCY ASSISTANCE: (304) 843-1300 * * *

MATERIALS AND/OR THEIR CONTAINERS TO PREVENT ENVIRONMENTAL CONTAMINATION. IT IS YOUR DUTY TO DISPOSE OF THE CHEMICAL MATERIALS AND/OR THEIR CONTAINERS IN ACCORDANCE WITH THE CLEAN AIR ACT, THE CLEAN WATER ACT, THE RESOURCE CONSERVATION AND RECOVERY ACT, AS WELL AS ANY OTHER RELEVANT FEDERAL, STATE, OR LOCAL LAWS/REGULATIONS REGARDING DISPOSAL.

SECTION 8 * SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:

USE NIOSH/MSHA APPROVED DUST/MIST FILTER RESPIRATOR FOR ROUTINE WORK PURPOSE WHEN EXPOSURE TO MISTS EXCEED THE PERMISSIBLE EXPOSURE LIMITS. THE RESPIRATOR USE LIMITATIONS MADE BY NIOSH/MSHA OR THE MANUFACTURER MUST BE OBSERVED. RESPIRATORY PROTECTION PROGRAMS MUST BE IN ACCORDANCE WITH 29 CFR 1910.134.

VENTILATION(TYPE):

LOCAL EXHAUST SUFFICIENT TO MAINTAIN DUST LEVELS BELOW PERMISSIBLE EXPOSURE LIMIT.

EYE PROTECTION:

CLOSE FITTING CHEMICAL SAFETY GOGGLES WITH FACE SHIELD.

GLOVES:

NITRILE, NEOPRENE, NATURAL RUBBER.

OTHER PROTECTIVE EQUIPMENT:

RUBBER BOOTS WITH SAFETY TOES, RUBBER APRONS, PVC CLOTHING, PLASTIC HARD HAT SHOULD BE USED WHEN NECESSARY TO PREVENT SKIN CONTACT. PERSONAL PROTECTIVE CLOTHING AND USE OF EQUIPMENT MUST BE IN ACCORDANCE WITH 29 CFR 1910.133 AND 29 CFR 1910.132.

SECTION 9 * SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN DURING HANDLING AND STORING:

- * WEAR NIOSH/MSHA APPROVED, DUST TYPE RESPIRATOR, WHERE DUSTS OR MISTS MAY BE GENERATED.
- * STORE IN A DRY PLACE INDOORS.
- * NEVER TOUCH EYES OR FACE WITH HANDS OR GLOVES THAT MAY BE CONTAMINATED WITH PELS CAUSTIC SODA BEADS.
- * NEVER ENTER A PELS CAUSTIC SODA STORAGE TANK OR CONTAINER (TRUCK OR RAIL CAR) EVEN IF IT APPEARS EMPTY.
- * AVOID CONTACT WITH ORGANIC MATERIALS AND CONCENTRATED ACIDS - MAY CAUSE VIOLENT REACTIONS; CAUSTIC SODA REACTS WITH MAGNESIUM, ALUMINUM, ZINC

(GALVANIZED), TIN, CHROMIUM, BRASS AND BRONZE, GENERATING HYDROGEN WHICH IS EXPLOSIVE. ALSO, CAUSTIC SODA MAY REACT WITH VARIOUS SUGARS TO GENERATE CARBON MONOXIDE.

- * WHEN MAKING SOLUTIONS, ADD PELS CAUSTIC SODA SLOWLY TO SURFACE OF COLD WATER WHILE STIRRING, TO AVOID VIOLENT SPATTERING.
- * KEEP CONTAINERS CLOSED WHEN NOT IN USE.
- * HAZARDOUS CARBON MONOXIDE GAS CAN FORM UPON CONTACT WITH FOOD AND BEVERAGE PRODUCTS IN ENCLOSED VESSELS AND CAN CAUSE DEATH. FOLLOW APPROPRIATE TANK ENTRY PROCEDURES (SEE ANSI Z177.1 - 1977).

OTHER PRECAUTIONS:

- * DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING. CAN CAUSE SEVERE INJURY OR BLINDNESS.
- * DO NOT BREATHE MIST.
- * DO NOT SWALLOW.
- * WASH THOROUGHLY AFTER HANDLING.
- * DO NOT EAT, DRINK, OR SMOKE IN WORK AREAS.

COMMENTS:

TSCA - SODIUM HYDROXIDE IS ON THE TSCA INVENTORY UNDER CAS NO. 1310-73-2.

SARA TITLE III - A) 311/312 CATEGORIES - ACUTE AND REACTIVITY, B) NOT LISTED IN SECTION 313, C) NOT LISTED AS AN "EXTREMELY HAZARDOUS SUBSTANCE" IN SECTION 302.

CERCLA - LISTED IN TABLE 302.4 OF 40 CFR PART 302 AS A HAZARDOUS SUBSTANCE WITH A REPORTABLE QUANTITY OF 1000 POUNDS. RELEASES TO AIR, LAND, OR WATER WHICH EXCEED THE RQ MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER, 800-424-8802.

CANADIAN WHMIS - A) SENSITIZATION TO PRODUCT: NONE KNOWN; B) REPRODUCTIVE TOXICITY: NONE KNOWN; C) ODOR THRESHOLD: NO ODOR; D) PRODUCT USE: SOURCE OF ALKALINITY; E) REQUIRES CORROSIVE SYMBOL (CLASS E).



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FOR INFORMATION:

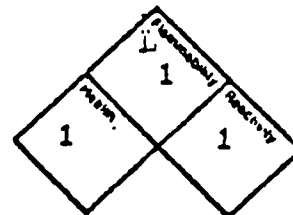
914-294-5726

EMERGENCY

AFTER
HOURS:

914-374-8134

NFPA HAZARD
CLASSIFICATIONS



I. IDENTIFICATION

LABEL NAME:

Tank Add 3011

PRODUCT NAME:

Same as above

CHEMICAL NAME:

d-limonene

SYNONYMS:

NONE

CHEMICAL ABSTRACT

REGISTRY NUMBER:

Not Applicable

II. PHYSICAL DATA

SPECIFIC GRAVITY 25/25° C (H₂O = 1)

0.8400

VAPOR PRESSURE: Not Available
(at 20° C in mm Hg)

SOLUBILITY IN WATER:

Not Soluble

VAPOR DENSITY: greater than 1
(Air = 1)

PHYSICAL STATE:

BOILING POINT: Not applicable
(at 760 mm Hg)

ODOR:

Fragrance Concentrate

III. FIRE AND EXPLOSION HAZARD INFORMATION

FLASH POINT:

(Closed Cup) 115° F TCC

STABILITY:

Stable

DEPARTMENT OF TRANSPORTATION

HAZARD CLASSIFICATION:

Non-hazardous

INCOMPATIBILITY (MATERIALS TO AVOID):

Strong oxidizing agents.

EXTINGUISHING MEDIA:

Water _____

Foam ☒

CO₂ ☒

Dry Chemical ☒

UNUSUAL FIRE AND EXPLOSION HAZARDS:

None

HAZARDOUS COMBUSTION PRODUCTS:

Smoke, Water, Carbon Dioxide, Carbon Monoxide

FIRE FIGHTING PROCEDURES: Use standard procedures and preferred extinguishing media above.

IV. HEALTH HAZARD INFORMATION

THRESHOLD LIMIT VALUE (TLV):
OSHA PERMISSIBLE EXPOSURE LIMIT (PEL): Not Established

HEALTH HAZARD DETERMINATION: May cause irritation to the eyes, with direct contact

V. EMERGENCY AND FIRST AID PROCEDURES

EYE (CONTACT):

In the event of contact with the eyes, irrigate with water for at least ten minutes; obtain medical advice if irritation persists.

Irrigate with water for ten minutes, see a eye physician if irritation persists.

SKIN (CONTACT):

Remove contaminated clothes. Wash affected area with water. If irritation persists, obtain medical advice.

INGESTION (SWALLOWING):

Administer water or milk and see a physician.

VI. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Absorb on an inert material and discard.

WASTE DISPOSAL METHOD:

Incineration or sanitary landfill in accordance with local, state and federal regulations.

VII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: None, if used
in well ventilated area.

VENTILATION:
Normal room circulation.

PROTECTIVE GLOVES:
recommended.

EYE PROTECTION:
Safety goggles

OTHER PROTECTIVE EQUIPMENT: None

PRECAUTIONS (HANDLING AND STORING):

Keep away from heat and flame.

Keep container closed when not in use.

Use with adequate ventilation.

MATERIAL SAFETY DATA SHEET PREPARED BY:

DATE:

Bernard M. Kitzner

August 23, 1988